



NCRN Natural Resource Quarterly

Winter 2014

Forest Vegetation Visualizer

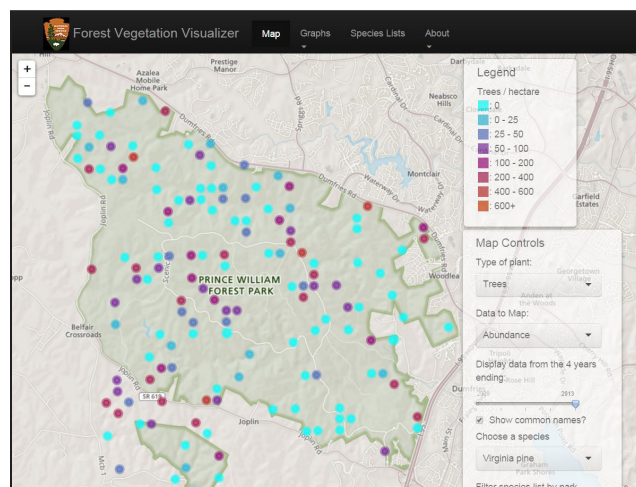
The National Capital Region Network, Inventory & Monitoring program (NCRN I&M) is proud to announce the release of a new, online Forest Vegetation Visualizer! What's a visualizer? It's an interactive website that lets users search and display data graphically, and this one is all about forests in the NCR!

The Forest Veg Visualizer can help you delve into questions like:

- Which monitoring plots have ash trees?
- What are the tree seedling numbers in my park and how are they changing?
- Which plots have the most Japanese honeysuckle?
- What is the most prominent tree species in my park (using forestry importance value)?

The visualizer lets users browse through data on trees, shrubs, vines, seedlings, and herbs using maps, species lists, and graphs. All NCRN I&M forest monitoring data from 2006 through the present is searchable through the site. Updates will be made regularly as more monitoring data is gathered.

There's actually enough information available through the visualizer right now, that it's possible to get a little overwhelmed. If you fall into this category, a great place to start is with the "How To" video available on the homepage (look



The mapping tool of the Forest Vegetation Visualizer is used here to show the abundance of Virginia pines per hectare at Prince William Forest Park.

for the blue button). The video walks through a few of the basic pathways for using the visualizer to extract and look at data.

The visualizer's interactive map style

should look familiar. The map comes from the same standardized "Park Tiles" GIS data used by the Harpers Ferry Center in park brochures and the "Find a Park" tool on the NPS.gov homepage. Users can turn on layers for soil type, forest cover, and ecoregion.

Graphs and data tables are available and can show species abundance, basal area (biomass of trees per hectare), and the proportion of plots occupied by a certain species. All graphs and tables can be downloaded and saved for use in other settings.

Full plant species lists available through the site come in two varieties—one listing all the plants in (Continued page 2)

Fieldwork scheduled for December, January, and February

	ANTI*	CATO	CHOH	GWMP	HAFE	MANA	MONO	NACE	PRWI	ROCR	WOTR
I&M Water Monitoring (quarterly)	X	X		X	X	X	X	X	X	X	X
I&M Water Monitoring (continuous)		X				X			X	X	X

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(Forest Visualizer continued)

NCRN monitoring plots, and the other listing all the plants recorded in the NPSpecies database. Both can be sorted by common or Latin name.

The Forest Vegetation Visualizer is currently available through a link on our forest monitoring webpage where you can also find more information about our monitoring activities: <http://science.nature.nps.gov/im/units/ncrn/monitor/forest/index.cfm>.

Visualizing the Future

The Forest Veg Visualizer follows the success of NCRN's recent Water Quality Visualizer (http://science.nature.nps.gov/im/units/ncrn/monitor/water_quality/visualizer.cfm).

[gov/im/units/ncrn/monitor/water_quality/visualizer.cfm](http://science.nature.nps.gov/im/units/ncrn/monitor/water_quality/visualizer.cfm)). The Water Visualizer has a similar function—displaying NCRN I&M's stream water monitoring data in an interactive online format.

NCRN will continue to add to both the Forest Veg and Water Visualizers as monitoring data continues to be generated. We would like to incrementally improve the functionality of both sites. Your feedback is welcome. Comments or suggestions for improving the sites can be directed to John Schmit via NPS email. In the future, we also hope to create a visualizer for NCRN forest bird monitoring data, so stay tuned!

JP Schmit Wins Exceptional IT Service Award for Visualizer

NCRN I&M is proud to announce that Quantitative Ecologist, John Paul (J.P.) Schmit is the recipient of the NPS 2014 Exceptional IT Service Award!

The award highlights J.P.'s exceptional work in creating an online, interactive tool to help park staff better understand and respond to stream water quality. The "Water Quality Visualizer" (http://science.nature.nps.gov/im/units/ncrn/monitor/water_quality/visualizer.cfm) uses NCRN water monitoring data to create graphs of water quality parameters (pH, temperature, etc.) in specific NCRN streams. It shows trends, seasonal patterns, and acceptable threshold levels. Information can be

downloaded as an image or raw data. The visualizer stays up-to-date, using data stretching from June 2005 to the present. It will be continually updated as NCRN water monitoring continues.

J.P. will be honored with this exceptional service award during the National Capital Region awards ceremony December 4, 2014. He has been a member of the NCRN team since 2005.



John Paul Schmit.

Photo: NPS/Paradis

New Faces in NCR: Hydrotech Margie Shaffer & Natural Resource Specialist Jim Pieper

Jim Pieper is the new Natural Resource Specialist for NCR Natural Resources and Science. This new position is focused on supporting park planning efforts, including ensuring NCR parks complete Resource Stewardship Strategies and State of the Parks Reports. He will also support NCR-wide Environmental Assessments, such as the Deer Management EAs/EISs and the NCR Invasive Plant Management Plan/EA.



Jim Pieper

Photo: NPS/Lynch

Margie Shaffer will soon join the NCRN I&M team as a Hydrotech, leading water monitoring efforts throughout the National Capital Region. Margie comes to NCRN I&M from a fisheries position with the Bureau of Reclamation in Nevada. She has a bachelor's degree in biology with a marine concentration.



Margie Shaffer

Photo: Shaffer

Park Acronyms

ANTI = Antietam National Battlefield
CATO = Catocin Mountain Park
CHOH = Chesapeake & Ohio Canal National Historical Park
GWMP = George Washington Memorial Parkway
HAFF = Harpers Ferry National Historical Park

MANA = Manassas National Battlefield Park
MONO = Monocacy National Battlefield
NACE = National Capital Parks - East
NAMA = National Mall and Memorial Parks
PRWI = Prince William Forest Park
ROCR = Rock Creek Park
WOTR = Wolf Trap National Park for the Performing Arts

2014 American Chestnut Resource Briefs and Data Released

Results of NCRN's 2014 American chestnut inventory are now available online. Products include:

- 1) a resource brief summarizing inventory results at the regional level,
- 2) there are also 5 park-specific resource briefs for those parks with the highest numbers of American chestnuts (CATO, GWMP, HAFE, ROCR, and WOTR), and
- 3) a geodatabase containing chestnut location points, monitoring tracklines, and areas surveyed (NPS-only access). Also included are data on tree diameter at breast height, estimated height, canopy position, evidence of visible blight symptoms, and evidence of reproductive structures like flowers and fruit. Each NCR park has one folder (feature dataset) within the database.

All resource briefs and the geodatabase are available at: <https://irma.nps.gov/App/Reference/Profile/2217458> and also through the NCRN publications webpage: <http://science.nature.nps.gov/im/units/ncrn/publications.cfm>.



An American chestnut sapling at Catoclin Mountain Park.

Photos: NPS/Riedman

Visual Method for Estimating Park Rat Problems

Scott Bates, NCR Wildlife Biologist

If you want to treat a problem, it helps to know how big it is. And if your problem is rats, there is a subjective method to assess rat infestation, courtesy of the Internet Center for Wildlife Damage Management (ICWDM). ICWDM is a consortium of pest subject matter experts from Cornell University, the University of Nebraska-Lincoln, Clemson University, and Utah State University.

I recently used this method when assessing a rat problem at GWMP-Gravelly Point Park with NCR Integrated Pest Management Coordinator Jil Swearingen. Rat sign and visual sightings are of limited value in accurately estimating rat numbers, but they are the simplest and often the only practical method available.

The Method

Search premises thoroughly when looking for rats. In structures, searches should include attics, basements, around foundations, crawl spaces, and behind and under stored materials. The following estimates can then be made:

- No sign: no rats or few present. If only a few rats are present they may have invaded only recently.
- Old droppings and gnawing common, one or more rats seen by flashlight at night, or no rats observed in daytime: medium numbers present.

- Fresh droppings, tracks, and gnawing present, three or more rats seen at night, or rats seen in daytime: large numbers present.

Since rats are normally nocturnal and somewhat wary of humans, usually many more rats are present than will be seen in the daytime. Under certain conditions, rats may become quite bold in the presence of humans, and then a high percentage of the population may be visible. For full details visit: <http://icwdm.org/handbook/rodents/NorwayRats.asp>.

Wildlife Damage Management

The Internet Center for Wildlife Damage Management provides research-based information on how to responsibly handle wildlife damage problems. It is online at: <http://icwdm.org/>.



Evidence of rat infestation at Gravelly Point Park in GWMP. **Above:** Burrow holes in the ground. **Right:** chewing damage to trash cans.



Photos: NPS/Swearingen

2014 Forest Bird Monitoring Highlights

NCRN I&M forest bird monitoring wrapped up its 8th year this past summer. Three experienced observers surveyed forest birds at 410 permanent plots across the region between May 15 and July 9. They conducted point counts twice at each plot throughout the season.

A total of 129 species were observed across the region in forest bird monitoring plots during 2014. The total number of bird species recorded in NCRN parks since monitoring began in 2007 now stands at 172.

Several species of conservation concern were observed. The cerulean warbler (*Dendroica cerulea*) was detected in CATO, where it has been detected in previous years. And CHOH was the only park unit where blue-winged warbler (*Vermivora pinus*), olive-sided flycatcher (*Contopus cooperi*), and yellow-throated warbler (*Dendroica dominica*) [pictured] were recorded.

Overall, we detected several Partners in Flight Watchlist species of both conservation concern and regional con-



A yellow-throated warbler (*Dendroica dominica*).

Photo: Christopher L. Wood

cern, including the Baltimore oriole (*Icterus galbula*), eastern towhee (*Pipilo erythrophthalmus*), northern flicker (*Colaptes auratus*), Kentucky warbler (*Geothlypis formosa*), Louisiana waterthrush (*Parus motacilla*), prothonotary warbler (*Protonotaria citrea*), veery (*Catharus fuscescens*), worm-eating warbler (*Helmitheros vermivorus*), and wood thrush (*Hylocichla mustelina*).

This year we added new forest bird plots at WOTR, MONO, and ANTI to improve sampling power. There are now 6 plots at WOTR, 15 at MONO, and 14 at ANTI.

Also this year, grassland bird monitoring was pilot tested at MANA with crews conducting three monitoring visits to 44 grassland monitoring locations in the park. A total of 83 different species were documented in these grassland plots.

Data from all years of bird monitoring (2007-2014) is now available at: http://science.nature.nps.gov/im/units/ncrn/monitor/forest_birds/index.cfm.

Calendar

DECEMBER

17. NCR RESS (Resources Stewardship & Science) Holiday Party. Museum Resource Center (MRCE), Landover, MD. 11 am- 1 pm. RSVP to Kathryn Smith at NPS email.

2015

JANUARY

15. Natural Resources Advisory Team (NAT) Meeting. CHOH. (Snow date: Jan 22)

22. Cultural Resources Advisory Team (CAT) Meeting. GWMP conference room.

MARCH

29-April 3. George Wright Society Conference. Oakland, CA. <http://www.georgewright.org/gws2015>

APRIL

16. Natural Resources Advisory Team (NAT) Meeting. GWMP- Turkey Run.

National Capital Region Network Inventory & Monitoring (NCRN I&M) Staff:

Program Manager: Patrick Campbell
Botanist: Liz Matthews
Data Manager: Geoff Sanders
GIS Specialist: vacant
Hydrologic Technician: Tonya Watts
Hydrologic Technician: Margie Shaffer
Quantitative Ecologist: John Paul Schmit
Science Communicator: Megan Nortrup

Visit NCRN I&M online at:

Website: <http://science.nature.nps.gov/im/units/ncrn>
RSS: http://science.nature.nps.gov/im/units/ncrn/rss/ncrn_rss.xml
Facebook: <http://www.facebook.com/NPSNCRN>
Twitter: <https://twitter.com/NPSNCRN>

NCRN Natural Resource Quarterly offers updates on the status of park natural resources and Inventory and Monitoring (I&M) "vital signs" for the NPS National Capital Region Network (NCRN).

Questions or comments? Contact Megan Nortrup by NPS email or at 202-339-8314